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Atty. Docket No.:N17-756

## REMARKS

### *Status of the Claims*

Claims 4-6 are currently pending in the present application. Claims 4 and 6 are the independent claims.

### *Proposed Drawing Changes*

Applicants gratefully acknowledge the approval of the proposed drawing changes. Formal drawings including these changes will be filed in due course.

### *Rejection Under 35 U.S.C. § 103(a)*

1. Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tsuruoka, et al.* (U.S. Patent 6,373,190) in view of *Bongaers, et al.* (U.S. Patent 5,596,431). For at least the reasons set forth below, this rejection is believed to be improper and should be withdrawn.

It is established that a *prima facie* case of obviousness requires that **all of the elements** be found in the prior art. Necessarily, **if one element of the prior art is missing** from the applied art, a *prima facie* case of obviousness cannot be established.

Claim 4 is drawn to a display device, which includes:

“...a plate (36) having longitudinal channels (20) and a peripheral part (50,51),...; and electrodes (30, 31) disposed in said longitudinal channels... and each channel comprises a sloping ramp (55) sloping from said bottom plane (I) to said plane (III) and ending in said peripheral part (50,51)...”

It is respectfully submitted that the reference to *Tsuruoka, et al.* is void of at least the referenced limitations of claim 4.

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The Office Action states that the reference to "...*Tsuruoka, et al.* teaches a display device comprising: a plate having longitudinal channels and a peripheral part, which is adjacent to at least one side of the longitudinal channels, (See Fig. 4, items 41, 42 in description Col. 5, lines 3-19); ...and each channel has a sloping ramp from the bottom plane to the plane and ending in the peripheral part (See Fig. 4, items 41, 42 in description Col. 5, lines 3-19)." (Please refer to page 2 of the Office Action.)

In fact, the reference to *Tsuruoka, et al.* is drawn to a method of forming ribs of a plasma display device. To this end, Figs. 2 and 4 of *Tsuruoka, et al.* are drawn to molds for forming ribs of a plasma display device. The recesses 21 and 41 of the molds are filled with a glass paste for forming the ribs 4 and 34 shown in Figs. 1 and 3, respectively. The Office Action also relies on the teaching of the recess portions 41 of the mold, which are filled with glass paste to form the ribs, for a teaching of the longitudinal channels of claim 4. Clearly, the mold having recesses 41 of *Tsuruoka, et al.* is not the plate of a display device having longitudinal channels as recited in claim 4. Additionally, it is noted that the sloping portions of the recesses 41 of *Tsuruoka, et al.* are, of course, portions of the mold for forming the ribs, and cannot be properly construed to be the sloping ramps of the channels of the display device of claim 4. (Please refer to Figs. 1-4, column 3, line 46-column 4, line 44; and column 4, lines 3-19 of the reference to *Tsuruoka, et al.* for support for the above assertions.)

Accordingly, for at least the reasons set forth above the reference to *Tsuruoka, et al.* fails to disclose at least one of the elements of claim 4, and therefore a *prima facie*

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case of obviousness cannot be made based upon *Tsuruoka, et al.* Withdrawal of this rejection is respectfully requested.

2. Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tsuruoka, et al.* (U.S. Patent 6,373,190) and *Bongaers, et al.* further in view of *Asano, et al.* (U.S. Patent 6,353,288). For at least the reasons set forth below, it is respectfully submitted that this rejection is improper and should be withdrawn.

Claim 5, depends directly from claim 4, which is allowable over the applied art for the reasons set forth above. As such, claim 5 is also allowable.

Moreover, claim 5 is drawn to a **display device**, and includes the limitation that "...the electrodes (30, 31) are provided at the bottom of said longitudinal channels (20) and that each longitudinal channel has a central portion (52) having a first depth, flanked on one or both sides by a second portion (53) having a reduced depth ....".

For reasons consistent with the discussion of claim 4 above, it is respectfully submitted that the reference to *Tsuruoka, et al.* does not teach nor suggest a display device having longitudinal channels, **but rather a mold for forming ribs of a plasma display device**. Therefore, the reference to *Tsuruoka, et al.* cannot be relied upon for the teaching of the highlighted portion of claim 5, for reference to *Tsuruoka, et al.* teaches a **mold having recesses therein for making the ribs of the display device and not a display device having the claimed limitations regarding the depth of the longitudinal channels**.

Additionally, Applicants respectfully traverse the propriety of applying the reference to *Bongaers, et al.* to claim 5 in a rejection under 35 U.S.C. § 103(a). To this

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end, it is well known that if a reference teaches away from the claimed invention, it cannot serve to create a prima facie case of obviousness under 35 U.S.C. §103(a). A reference teaches away from the claimed invention if one of ordinary skill in the art, upon reading the reference, would be discouraged from following the path set out in the reference, or would be lead in a direction divergent from the path taken by the applicant. Moreover, a prior art reference must be considered in its entirety, i.e., as a whole, including those portions that would lead away from the claims invention.

The reference to *Bongaers, et al.* does disclose providing the electrodes in the bottom of the channels. (See Fig. 2 of *Bongaers, et al.*) However, the reference discourages the artisan of ordinary skill from pursuing the embodiment in which the electrodes are disposed in the bottoms of the channels, and would lead such an artisan to pursue fabrication of electrodes on the sidewalls of the channels instead (e.g., as shown in Fig. 4). To this end, the reference encourages the use of plasma etching in the fabrication of the glass channels and electrodes, which are disposed on the sidewalls of the channels. For example, *Bongaers, et al.* asserts that plasma etching is a less pollutive, self-aligned technique, which avoids wet etching and photolithographic techniques used to fabricate the structure of Fig. 2 of the reference. Inferentially, therefore, the reference discourages the formation of the electrodes on the bottom surfaces of the channels. (Please refer to column 1, line 58-column 2, line 19; and column 4, line 62-column 6, line 31 of *Bongaers, et al.* for support for the above assertions.)

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Accordingly, it is respectfully submitted that the reference to *Bongaers, et al.* teaches away from the claimed invention, and therefore cannot serve to form a prima facie case of obviousness.

As such, and for at least the reasons set forth above, the rejection of claim 5 is improper and should be withdrawn.

3. Claim 6 was rejected under 35 USC § 103(a) as being unpatentable over *Tsuruoka, et al.* and *Bongaers, et al.* in view of *French* (US Patent No. 6,400,423). For at least the reasons that follow, it is respectfully submitted that this rejection is improper and should be withdrawn.

First, it is submitted that the rejection does not comply with the provisions of MPEP § 706, as it fails to articulate a rejection so applicant has the opportunity to provide evidence of patentability. To wit, the Office Action states "*Tsuruoka, et al.* and *Bongaers, et al.* teaches about manufacturing ribs of a plasma display using flexible roller-intaglio. (See in description Col. 2, lines 41-44)." First, applicants are not claiming a method of manufacturing ribs of a plasma display using a flexible roller-intaglio. Second, it appears the cited description is from the reference to *Tsuruoka, et al.* The application of the reference to *Bongaers, et al.* is without explanation. It is respectfully submitted that this rejection does not meet the provisions of MPEP § 706.

Notwithstanding the above assertion, for at least the following reasons, it is respectfully submitted that claim 6 defines over the applied art.

Claim 6 includes the limitation of:

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*"...providing a plate (36) having longitudinal channels (20) and a peripheral part (50, 51) adjacent to at least one side of the channels; and  
"disposing electrodes (30,31) in said longitudinal channels;..."*

For reasons consistent with the discussion above in connection with claims 4 and 5, it is respectfully submitted that the reference to *Tsuruoka, et al.* discloses providing a mold for fabricating ribs of a plasma display device; and the recesses (21 and 41 in of *Tsuruoka, et al.*) of the mold are not the channels of the plate which receive the electrodes as claimed. Rather, the recesses receive the glass paste, which forms the ribs. As such, it is respectfully submitted that because the reference to *Tsuruoka, et al.* fails to disclose at least one of the claimed elements, a rejection of claim 6 based on this reference is improper and should be withdrawn.

For at least the reasons set forth above, the rejection of claim 6 is believed to be improper and should be withdrawn. Withdrawal of this rejection is earnestly solicited.

#### Conclusion

In view of the forgoing remarks, reconsideration and withdraw of all objections and rejections are respectfully requested. An early notice of allowance is earnestly solicited.

Except as otherwise stated in the previous Remarks, applicants note that each of the amendments have been made to place the claims in better form for U.S. practice or to clarify the meaning of the claims; not to distinguish the claims from prior art references,

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otherwise narrow the scope or comply with other statutory requirements. Moreover,

Applicants reserve all rights they may have under the Doctrine of Equivalents.

In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact William S. Francos, Esq. (Reg. No. 38,456) at (610)-375-3513 to discuss these matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies to charge payment or credit any overpayment to Deposit Account Number 50-0238 for any additional fees under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17.

Respectfully submitted on behalf of:

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Date: January 9, 2003

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